

Appendix A

Acronyms and Glossary

This page intentionally left blank.

Acronyms and Abbreviations

Table 1 provides a list of acronyms and abbreviations used throughout the Draft Environmental Assessment (EA).

Table 1. List of Acronyms and Abbreviations

Acronym and Abbreviations	Definition
AAD	Average Annual Day
AEDT	Aviation Environmental Design Tool
AGL	Above Ground Level
APE	Area of Potential Effect
ARTCC	Air Route Traffic Control Center
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
AZGFD	Arizona Game and Fish Department
BXK	Buckeye Municipal Airport
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH ₄	Methane
CHD	Chandler Municipal Airport
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CONV	Conventional
CY	Calendar Year
dB	Decibel
DME	Distance Measuring Equipment
DNL	Day-Night Average Sound Level
DOT	Department of Transportation
DVT	Phoenix Deer Valley Airport
EA	Environmental Assessment
E.O.	Executive Order
ESA	Endangered Species Act of 1973
EV	Electric Vehicle
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FEMA	Federal Emergency Management Agency
FFZ	Falcon Field Airport
FL	Flight Level

Acronym and Abbreviations	Definition
FR	Federal Register
GEU	Glendale Municipal Airport
GIS	Geographic Information System
GPS	Global Positioning System
GYR	Phoenix Goodyear Airport
HDMS	Heritage Data Management System
HFC	Hydrofluorocarbon
I-	Interstate
IAP	Instrument Approach Procedure
IFP	Instrument Flight Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IPaC	Information for Planning and Consultation
IWA	Mesa Gateway Airport
LED	Light-Emitting Diode
LUF	Luke Air Force Base
LOC	Localizer
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act of 1918
MOA	Military Operating Area
MSL	Mean Sea Level
MT	Metric Ton(s)
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NATCA	National Air Traffic Controllers Association
NAVAID	Navigational Aid
NextGen	Next Generation of Air Transportation System
NEPA	National Environmental Policy Act of 1969
NextGen	Next Generation Air Transportation System
NHPA	National Historic Preservation Act of 1966
NM	Nautical Mile
NO ₂	Nitrogen Dioxide
N ₂ O	Nitrous Oxide
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NOI	Notice of Intent
NPIAS	National Plan of Integrated Airport Systems

Acronym and Abbreviations	Definition
NPS	National Park Service
NRHP	National Register of Historic Places
O ₃	Ozone
ODP	Obstacle Departure Procedure
OPSNET	Operations Network
P19	Stellar Airpark
P50	Phoenix Terminal Radar Approach Control Facility
PHX	Phoenix Sky Harbor International Airport
Pb	Lead
PBN	Performance-Based Navigation
PDARS	Performance Data Analysis and Reporting System
PFC	Perfluorochemical
PM	Particulate Matter
PM ₁₀	Particulate Matter of 10 micrometers or less
PM _{2.5}	Particulate Matter of 2.5 micrometers or less
the Project	Phoenix Area FAA Modernization Project
RAPCON	Radar Approach Control
RNAV	Area Navigation
RNP	Required Navigation Performance
RWY	Runway
SDL	Scottsdale Airport
SF ₆	Sulfur Hexafluoride
SGCN	Species of Greater Conservation Need
SHPO	State Historic Preservation Officer
SIAP	Standard Instrument Approach Procedures
SID	Standard Instrument Departure
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TAF	Terminal Area Forecast
TARGETS	Terminal Area Route Generation, Evaluation, Traffic, and Simulation
TCAS RAs	Traffic Alert and Collision Avoidance System Resolution Advisories
TERPS	Terminal Instrument Procedures
TFMSC	Traffic Flow Management System Counts
THPO	Tribal Historic Preservation Officer
TRACON	Terminal Radar Approach Control
U.S.	United States

Acronym and Abbreviations	Definition
U.S. EPA	Environmental Protection Agency
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Range
VOR/DME	Very High Frequency Omnidirectional Range with Distance Measuring Equipment
VOR/DME-A	Very High Frequency Omnidirectional Range with Distance Measuring Equipment not Aligned (within 30 degrees of the runways at the airport)
ZAB	Albuquerque Air Route Traffic Control Center
ZLA	Los Angeles Air Route Traffic Control Center

Glossary

Table 2 identifies and defines technical terms used throughout the EA.

Table 2. Glossary

Term	Definition
Air Pollutant	Any substance in air that could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in gases, particulates, or in combinations thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants or by reaction with normal atmospheric constituents, with or without photo-activation.
Air Route Traffic Control Center	A Federal Aviation Administration facility established to provide air traffic control service to aircraft operating on an Instrument Flight Rules flight plan within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to Visual Flight Rules.
Air Traffic Control (ATC)	A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
Airport Traffic Control Tower (ATCT)	A facility that uses air/ground communications, visual signaling, and other devices to provide Air Traffic Control services to aircraft operating in the vicinity of an airport. Authorizes aircraft to land or take off at the airport controlled by the tower regardless of flight plan or weather conditions.
Airspace	Navigable area used by aircraft for purposes of flight.
Airway	An area of Class E airspace established in the form of a corridor, the centerline of which is defined by radio navigational aids. The network of airways serving aircraft operations up to but not including 18,000 feet mean sea level are referred to as "Victor" airways. The network of airways serving aircraft operations at or above 18,000 feet mean sea level are referred to as "Jet" airways.
Altitude	Height above a reference point, usually expressed in feet. Reference points are typically sea level, the ground, or airfield elevation in which case mean sea level, above ground level, or above field elevation further describes the altitude, respectively.
Ambient Noise Level	The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the receiver.
Area Navigation (RNAV)	A method of air navigation that permits aircraft to operate on any desired course within a network of station-referenced navigation aids (NAVAIDs), rather than navigating directly to and from the NAVAIDs.
Attainment Area	An area in which the Federal or state standards for ambient air quality are being achieved.
Aviation Environmental Design Tool (AEDT)	A software system that models aircraft performance in space and time to estimate fuel consumption, emissions, noise, and air quality consequences.
A-Weighted Sound Level	A quantity, in decibels, read from a standard sound-level meter with A-weighting circuitry. The A-weighting scale discriminates against the lower frequencies below 1000 hertz according to a relationship approximating the auditory sensitivity of the human ear. The A-weighted sound level is approximately related to the relative "noisiness" or "annoyance" of many common sounds.

Term	Definition
Block	Census blocks are small areas bounded on all sides by visible features such as streets, roads, streams, and railroad tracks, and by invisible boundaries such as city, town, township, and county limits; property lines; and short, imaginary extensions of streets and roads. Blocks are numbered uniquely within each census tract or block numbering area. A three-digit number identifies a block, sometimes with a single alphabetical suffix. The U.S. Census Bureau designates census blocks.
Centroid	A point representing the geographic center of a U.S. Census Bureau census block.
Climb	The act or instance of increasing altitude.
Conformity	A determination that a project conforms with a State Implementation Plan whose purpose is to eliminate or reduce the severity and number of violations of the National Ambient Air Quality Standards and does not impede the scheduled attainment of such standards.
Constructive Use	When the proximity impacts (e.g., noise) of a proposed project adjacent to or near a Section 4(f) property result in substantial impairment of the property.
Controlled Airspace	Airspace of defined dimensions within which air traffic control service is provided to Instrument Flight Rules and Visual Flight Rules flights in accordance with the airspace classification.
Criteria Pollutants	The 1970 amendments to the Clean Air Act required the U.S. EPA to set National Ambient Air Quality Standards for certain pollutants known to be hazardous to human health. The U.S. Environmental Protection Agency (U.S. EPA) has identified and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide. The term “criteria pollutants” derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. It is on the basis of these criteria that standards are set or revised.
Day-Night Average Sound Level (DNL)	A measure of the annual average noise environment over a 24-hour day. It is the 24-hour, logarithmic- (or energy-) average, A-weighted sound level with a 10-decibel penalty applied to the nighttime event levels that occur between 10 p.m. and 7 a.m.
De minimis Levels	De minimis is defined as lacking significance or importance, or so minor as to be disregarded. De minimis levels are minimum air pollutant levels and vary according to the type of pollutant and severity of the non-attainment area. Unless state minimums are lower than Federal, these levels are consistent for all conformity determinations. The calculation of total project emissions is made and compared to these de minimis cutoffs. If the emissions for a pollutant are above de minimis, the project requires a conformity determination. All emissions from the project must be analyzed and found to conform, not only those above the de minimis levels.
Decibel (dB)	Commonly used to define the level produced by a sound source. The decibel scale is logarithmic (i.e., when the scale goes up by ten, the perceived level is twice as loud).
Departure	The act of an aircraft taking off from an airport.
Departure Procedure	A preplanned Instrument Flight Rules Air Traffic Control departure procedure printed for pilot use in graphic and/or textual form. Departure procedures provide transition from the terminal to the appropriate en route structure.
Descent	The process of decreasing altitude.
Design Constraint	A required limitation or condition, such as safety standards, airspace structure, or environmental considerations, that must be satisfied during the development of flight procedures.

Term	Definition
Distance Measuring Equipment (DME)	Equipment installed on an aircraft that provides the distance of the aircraft in relation to a navigation aid as well as ground speed. Distance Measuring Equipment (DME) transmitters are often co-located with a Very High Frequency Omni-directional Radio Range Station (VOR), known in this case as a VOR-DME.
Emissions	Pollution discharged into the atmosphere from stationary sources such as smokestacks, surface areas of commercial or industrial facilities, or residential chimneys and from mobile sources such as motor vehicles, locomotives, or aircraft exhausts.
En Route Airspace	A general term to describe the airspace controlled by an Air Route Traffic Control Center.
Enplanement	The total number of revenue passengers boarding aircraft, including originating, stopover, and transfer passengers, in scheduled and nonscheduled services.
Equipage	Communication, navigation, and surveillance equipment installed on an aircraft.
Equivalent Sound Level (Leq)	The level of a constant sound which, in the given situation and time period, has the same average sound energy as does a time-varying sound. Specifically, equivalent sound level is the energy-averaged sound pressure level of the individual A-weighted sound pressure levels occurring during the time interval.
Federal Aviation Administration (FAA)	The FAA is the agency of the U.S. Department of Transportation with primary responsibility for civil aviation. Among its major functions are the regulation of civil aviation to promote safety, fulfill the requirements of national defense and development, and operate a common system of air traffic control and navigation for both civil and military aircraft.
Fix	A geographical position determined by reference to one or more radio NAVAIDS, celestial plotting, or by some other means such as satellite navigation.
Flight Track	The path an aircraft describes over the ground.
Flow	Describes the direction in which aircraft take off and land at a particular airport. Aircraft generally take off and land into the wind. However, other factors (e.g., nearby airports, construction) can also affect flow.
Flyways	Migration routes for avian species.
General Aviation	All civil aviation except scheduled passenger, air taxi, and cargo airlines.
General Study Area	Primary geographic boundary used to describe existing conditions and evaluate potential environmental impacts of the Proposed Action. It encompasses representative IFR flight tracks based on 2024 radar data and includes areas where aircraft operate at or below defined altitude thresholds (generally 7,000–10,000 feet AGL), with boundaries informed by terrain and U.S. Census block groups to reflect actual air traffic flow.
Global Positioning System (GPS)	A satellite-based radio positioning and navigation system operated by the U.S. Department of Defense. The system provides highly accurate position and velocity information and precise time on a continuous global basis to an unlimited number of properly equipped users.
Heading	A compass bearing indicating the direction of travel.
Instrument Approach Procedure (IAP)	A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a land or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by a competent authority.
Instrument Flight Rules (IFR)	Rules governing the procedures for conducting instrument flight in aircraft. Also a term used by pilots and controllers to indicate type of flight plan.
Knots	Speed measured in nautical miles per hour.

Term	Definition
Level Off	The process by which an aircraft which is climbing or descending transitions to a constant altitude. This can be done once the aircraft reaches its cruise altitude in the en route environment or as a series of steps taken as the aircraft transition to/from the en route environment to guarantee adequate separation from other aircraft.
Mean Sea Level (MSL)	The height of the surface of the sea for all stages of the tide, used as a reference for elevations or altitude of aircraft flight. Also called sea level datum.
National Airspace System (NAS)	The common network of air navigation facilities, equipment, and services; airports and landing areas; aeronautical charts, information, and services; rules, regulations and procedures; technical information; manpower; and material.
National Ambient Air Quality Standards (NAAQS)	Standards for criteria pollutants established by U.S. Environmental Protection Agency that apply to outdoor air.
Nautical Mile (NM)	A measure of distance equal to 1 minute of arc on the earth's surface (approximately 6,076 ft. or approximately 1.15 statute miles).
Navigation Aids (NAVAIDs)	Any visual or electronic device airborne or on the surface that provides point to point guidance information or position data to aircraft in flight.
Next Generation Air Transportation Systems (NextGen)	A program shifting aircraft procedures from fixed, ground-based radio navigation transmitting facilities and radar to satellite, or Global Positioning System, navigation and onboard surveillance.
No Action Alternative	The baseline alternative required under the National Environmental Policy Act in which existing conditions are assumed to continue without implementation of the proposed action, serving as a reference for comparison.
Noise	Any sound that is undesirable because it interferes with speech and hearing or is intense enough to damage hearing or is otherwise annoying.
Noise Compatible Land Use	A land use that is considered acceptable within a given noise exposure level based on established federal, state, or local compatibility guidelines.
Noise Exposure	The cumulative acoustic stimulation reaching the ear of a person over a specified period of time (e.g., a work shift, a day, a working life, or a lifetime).
Noise-Sensitive Use	A land use or activity that is particularly sensitive to noise exposure, including residences, schools, hospitals, places of worship, parks, and other areas where quiet conditions are important.
Non-Attainment Area	Areas with levels that exceed one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act.
Study Airports	These are the airports that are the subject of the Proposed Action.
Obstacle Departure Procedure (ODP)	A published Instrument Flight Procedures departure designed primarily to ensure obstacle clearance after takeoff, which may be depicted graphically or described textually.
Operation	Landing or take-off of an aircraft.
Overflight	Aircraft whose flights originate or terminate outside the controlling facility's area that transit the airspace without landing.
Peak Traffic Period	A period of time during which aircraft operations are at or near maximum levels, often resulting in increased congestion, workload, and the need for traffic management initiatives.
Performance-Based Navigation (PBN)	Specifies that aircraft Required Navigation Performance and Area Navigation systems performance requirements be defined in terms of accuracy, integrity, availability, continuity, and functionality required for the purposed operations in the context of a particular airspace, when supported by the appropriate navigation infrastructure.

Term	Definition
Procedural Deconfliction	Defined altitude or lateral restrictions as part of a procedure to keep aircraft from conflicting with other aircraft on different procedures.
Required Navigation Performance (RNP)	A type of performance-based navigation that allows an aircraft to fly a specific path between two 3-dimensionally defined points in space.
Runway Transition	A defined segment of a published arrival or departure procedure that connects a runway to the common route or vice versa, typically beginning or ending at a runway specific waypoint or fix.
Satellite-based Navigation	See Global Positioning System (GPS).
Satellite Airport	An airport located within the same terminal airspace as a primary airport that shares airspace and traffic flows but is not the dominant operational facility.
Section 4(f)	A property that may be protected under special provisions of the U.S. Department of Transportation Act, 49 USC 303(c).
Sector	A defined volume of airspace, including both lateral and vertical limits, in which an air traffic controller is responsible for the safe movement of air traffic. A Terminal Radar Approach Control Facility's or Air Route Traffic Control Center's airspace is comprised of multiple sectors.
Sector Overload	A condition in which the volume or complexity of aircraft traffic within an air traffic control sector exceeds optimal controller workload levels, potentially requiring traffic restrictions, reroutes, or increased vectoring.
Separation	Required Federal Aviation Administration minimum spacing between aircraft.
Sequencing	A process used to merge air traffic into an orderly flow.
Standard Instrument Approach Procedure (SIAP)	A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a land or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by a competent authority.
Standard Instrument Departure Procedure (SID)	A preplanned Instrument Flight Rules departure procedure published for pilot use, in graphic or textual format, that provides obstruction clearance from the terminal area to the appropriate en route structure.
Standard Terminal Arrival (STAR)	A preplanned Instrument Flight Rules air traffic control arrival procedure published for pilot use in graphic and/or textual form. STARs provide transition from the en route structure to an outer fix or an instrument approach fix/arrival waypoint in the terminal area.
Supplemental Study Area	Expands beyond the General Study Area to ensure appropriate analysis of noise-sensitive resources, including national parks, wildlife refuges, and cultural properties. Consistent with FAA Order 7400.2R, it captures IFR aircraft operations at or below 18,000 feet above ground level to evaluate potential effects in areas where maintaining a quiet setting is a recognized and protected attribute.
Terminal Area	A general term used to describe airspace in which approach control service or airport traffic control service is provided.
Terminal Radar Approach Control (TRACON)	A Federal Aviation Administration air traffic control tower facility that uses radar and two-way radio communication to provide separation of air traffic within a specified geographic area in the vicinity of one or more large airports.
T-Route	T-routes are available for use by area navigation-equipped aircraft from 1,200 feet above the surface (or in some instances higher) up to but not including 18,000 feet mean sea level.
Vectoring	The assignment of specific headings, altitudes, or speeds by air traffic control to direct aircraft outside of published flight procedures in order to maintain separation, manage traffic flow, or resolve conflicts.

Term	Definition
Viewshed	The geographic area that is visible from a specific location, including the visual resources and features that may be affected by changes in aircraft visibility or movement.
Visual Character	The overall visual qualities and aesthetic attributes of an area, including landforms, vegetation, development patterns, and visible human activities.